

**What is claimed is:**

1           1. Apparatus for use in an encoder to ensure integrity of a hypothetical decoder  
2 buffer of a video buffer verifier comprising:

3           an encoder buffer including a bit content;

4           a transmission controller supplied with a representation of a prescribed number of  
5 bits for controllably inhibiting transmission of bits from said encoder buffer; and

6           a calculator for generating said representation of said prescribed number of bits in  
7 accordance with a prescribed relationship dependent on said encoder buffer bit content,  
8 and an end of picture indication.

1           2. The apparatus as defined in claim 1 wherein said transmission controller in  
2 response to said representation of said prescribed number of bits controllably inhibits  
3 transmission of bits from said encoder buffer upon said number of bits being read out  
4 from said encoder buffer.

1           3. The apparatus as defined in claim 2 wherein said calculator includes a detector  
2 for determining whether said picture has ended substantially on time.

1           4. The apparatus as defined in claim 3 wherein said prescribed number of bits is  
2 said encoder buffer bit content when said detector indicates that said picture ends  
3 substantially on time.

1           5. The apparatus as defined in claim 3 wherein said calculator is supplied with a  
2 first indication of said encoder buffer bit content when said picture actually ended and a  
3 second indication of said encoder buffer bit content when said picture should have ended.

1           6. The apparatus as defined in claim 5 wherein said prescribed number of bits is  
2 determined to be, in response to said first indication and said second indication, a number  
3 of bits in said encoder buffer bit content when said picture should have ended less any  
4 new bits written into said encoder buffer during an interval between when said picture  
5 actually ended to when said picture should have ended, when said detector has  
6 determined that said picture has ended early relative to an expected time for said picture  
7 to end.

1           7. The apparatus as defined in claim 6 wherein said encoder buffer includes a  
2 write pointer having a position representative of the number of bits written into said  
3 encoder buffer, said write pointer position at the time said picture actually ended being

4 said first indication and said write pointer position at the time said picture is expected to  
5 end being said second indication.

1 8. The apparatus as defined in claim 7 wherein said new bits written into said  
2 encoder buffer is equal to said second indication less said first indication.

1 9. The apparatus as defined in claim 3 wherein said transmission controller is  
2 essentially disabled from inhibiting transmission of bits from said encoder buffer during  
3 an interval from a time when said picture should have ended to a time when said picture  
4 actually ended, when said detector determines that said picture will end late.

1 10. The apparatus as defined in claim 9 wherein said prescribed number of bits is  
2 a number of bits in said encoder buffer bit content when said picture actually ended,  
3 when said detector has determined that said picture has ended late.

1 11. A method for use in an encoder to ensure integrity of a hypothetical decoder  
2 buffer of a video buffer verifier comprising the steps of:

3 storing bits in an encoder buffer;  
4 controllably inhibiting transmission of bits from said encoder buffer in response  
5 to a representation of a prescribed number of bits; and

6 generating said representation of said prescribed number of bits in accordance  
7 with a prescribed relationship dependent on a number of bits stored in said encoder  
8 buffer, and an end of picture indication.

1 12. The method as defined in claim 11 wherein said step of controllably  
2 inhibiting, in response to said representation of said prescribed number of bits,  
3 controllably inhibits transmission of bits from said encoder buffer upon said number of  
4 bits being read out from said encoder buffer.

1 13. The method as defined in claim 12 further including a step of determining  
2 whether said picture has ended substantially on time.

1 14. The method as defined in claim 13 wherein said prescribed number of bits is  
2 said number of bits stored in said encoder buffer when said step of determining indicates  
3 that said picture ends substantially on time.

1 15. The method as defined in claim 13 wherein said step of generating utilizes a  
2 first indication of said number of bits stored in said encoder buffer when said picture

3 actually ended and a second indication of said number of bits stored in said encoder  
4 buffer when said picture should have ended.

1 16. The method as defined in claim 15 wherein said step of generating includes a  
2 step of utilizing said first indication and said second indication to generate said  
3 representation of said prescribed number of bits as being a number of bits stored in said  
4 encoder buffer when said picture should have ended less any new bits written into said  
5 encoder buffer during an interval between when said picture actually ended to when said  
6 picture should have ended, when said detector has determined that said picture has ended  
7 early relative to an expected time for said picture to end.

1 17. The method as defined in claim 16 wherein said encoder buffer includes a  
2 write pointer having a position representative of the number of bits written into said  
3 encoder buffer, said write pointer position at the time said picture actually ended being  
4 said first indication and said write pointer position at the time said picture is expected to  
5 end being said second indication.

1 18. The method as defined in claim 17 wherein said new bits written into said  
2 encoder buffer is equal to said second indication less said first indication.

1 19. The method as defined in claim 13 wherein said step of controllably  
2 inhibiting transmission is essentially disabled from inhibiting transmission of bits from  
3 said encoder buffer during an interval from a time when said picture should have ended  
4 to a time when said picture actually ended, when said step of determining determines that  
5 said picture will end late.

1 20. The method as defined in claim 19 wherein said prescribed number of bits is  
2 a number of bits in said encoder buffer bit content when said picture actually ended,  
3 when said detector has determined that said picture has ended late.